Plant Science, 90 (1993) 233–235
Elsevier Scientific Publishers Ireland Ltd.

Subject Index

Volume 90 (1993)

Adventitious bud regeneration, *Prunus* spp., mature explant, in vitro culture, thidiazuron, silver nitrate, 201
Agronomic traits, *Pennisetum glaucum*, tissue culture, somaclonal variation, 53
Anther culture, haploid suspension, *Triticum aestivum* L., fertile dihaploid plant, 81
Apomixis, *Paspalum notatum*, embryogenic callus, suspension culture, plant regeneration, 73

Barley, *Hordeum vulgare*, somatic embryogenesis, plant regeneration, micro-explants, 211
Brassica napus, cybrid, mitochondria, subgenome, polymerase chain reaction, 95

Calcium movements, inositol trisphosphate, vacuole, tonoplast, second messenger, 135
Calli-clones, poplar, tissue culture, putative albino, phenotypic variation, chromosome number, growth related protein, 89
Carthamus tinctorius L., glucose oxidase, precarthamin, flower colour modification, 1
Cauliflower curd, clonal, protocol, 175
Cell membrane stability, groundnut, tissue culture, water stress, 179
Cell-free extracts, translation system, protein synthesis, ribosome-inactivating proteins, melonin, *Cucumis melo*, 127
Chlorophyll fluorescence, P515 electrochromic absorbance change, photophosphorylation, phytotoxin, tentoxin, chloroplast coupling factor, 119
Chloroplast coupling factor, chlorophyll fluorescence, P515 electrochromic absorbance change, photophosphorylation, phytotoxin, tentoxin, 119
Chloroplast differentiation, tobacco cell suspensions, cytokinin, light, nitrate reductase, poly(A) mRNA, 11
Chromosome number, poplar, tissue culture, putative albino, calli-clones, phenotypic variation, growth related protein, 89
Clonal, cauliflower curd, protocol, 175
Cucumis melo, translation system, protein synthesis, cell-free extracts, ribosome-inactivating proteins, melonin, 127
Cut-style pollination, *Lilium longiflorum*, placental pollination, pollen tube growth, micropyle, grafted style, 105
Cybrid, *Brassica napus*, mitochondria, subgenome, polymerase chain reaction, 95
Cyclohexylamine, exine, 4-*O*-methylmorpholine *N*-oxide, protoplasts, pollen, spores, 219
Cytokinin, tobacco cell suspensions, light, chloroplast differentiation, nitrate reductase, poly(A) mRNA, 11

Dihydrofolate reductase, *Zea mays* L., protoplasts, DNA-mediated transformation, methotrexate, plant regeneration, 41
DNA-mediated transformation, *Zea mays* L., protoplasts, methotrexate, dihydrofolate reductase, plant regeneration, 41

Embryogenic callus, *Paspalum notatum*, apomixis, suspension culture, plant regeneration, 73
Endosperm, rice, mutant, protein, lysine, 145
Environmental factors, *Triticum aestivum*, plant breeding, plant growth regulators, response functions, 195
Exine, cyclohexylamine, 4-*O*-methylmorpholine *N*-oxide, protoplasts, pollen, spores, 219

Ferredoxin, ferredoxin:NADP$^+$ oxidoreductase, protein kinase, protein phosphorylation, thylakoid membrane (spinach), 21
Ferredoxin:NADP$^+$ oxidoreductase, ferredoxin, protein kinase, protein phosphorylation, thylakoid membrane (spinach), 21
Fertile dihaploid plant, anther culture, haploid suspension, *Triticum aestivum* L., 81
Flower colour modification, *Carthamus tinctorius* L., glucose oxidase, precarthamin, 1

Galactose, *Rosa rugosa* Thunb., somatic embryogenesis, plant regeneration, sugars, sorbitol, 187
Genetic stability, somatic hybrid, tomato, morphology, individual variation, 225
Glucose oxidase, *Carthamus tinctorius* L., precarthamin, flower colour modification, 1
Grafted style, *Lilium longiflorum*, placental pollination, pollen tube growth, micropyle, cut-style pollination, 105
Groundnut, cell membrane stability, tissue culture, water stress, 179
Growth related protein, poplar, tissue culture, putative albino, calli-clones, phenotypic variation, chromosome number, 89

Haploid suspension, anther culture, *Triticum aestivum* L., fertile dihaploid plant, 81
Hordeum vulgare, barley, somatic embryogenesis, plant regeneration, micro-explants, 211

In vitro culture, *Prunus* spp., adventitious bud regeneration, mature explant, thidiazuron, silver nitrate, 201

Indica, rice (*Oryza sativa* L.), seed embryo proteins, subspecies, *japonica*, two-dimensional gel electrophoresis, 167
Individual variation, somatic hybrid, tomato, genetic stability, morphology, 225
Inositol trisphosphate, calcium movements, vacuole, tonoplast, second messenger, 135

Japonica, rice (*Oryza sativa* L.), seed embryo proteins, subspecies, *indica*, two-dimensional gel electrophoresis, 167

Light, tobacco cell suspensions, cytokinin, chloroplast differentiation, nitrate reductase, poly(A) mRNA, 11
Lilium longiflorum, placental pollination, pollen tube growth, micropyle, cut-style pollination, grafted style, 105
Lipoperoxidation, lipoxygenase, microsome, mitochondrion, phospholipase, proton gradient, 31
Lipoxygenase, lipoperoxidation, microsome, mitochondrion, phospholipase, proton gradient, 31
Long-term cultures, protocorm-like bodies, plant regeneration, tissue culture, 63
Lupin, *Lupinus angustifolius*, nitrogen fixation, nodulin, root nodule, 5′ upstream region, 155
Lupinus angustifolius, lupin, nitrogen fixation, nodulin, root nodule, 5′ upstream region, 155
Lysine, rice, mutant, endosperm, protein, 145

Mature explant, *Prunus* spp., adventitious bud regeneration, in vitro culture, thidiazuron, silver nitrate, 201
Melonin, translation system, protein synthesis, cell-free extracts, ribosome-inactivating proteins, *Cucumis melo*, 127
Methotrexate, *Zea mays* L., protoplasts, DNA-mediated transformation, dihydrofolate reductase, plant regeneration, 41
4-*O*-Methylmorpholine *N*-oxide, cyclohexylamine, exine, protoplasts, pollen, spores, 219
Micro-explants, barley, *Hordeum vulgare*, somatic embryogenesis, plant regeneration, 211
Micropyle, *Lilium longiflorum*, placental pollination, pollen tube growth, cut-style pollination, grafted style, 105
Microsome, lipoperoxidation, lipoxygenase, mitochondrion, phospholipase, proton gradient, 31
Mitochondria, *Brassica napus*, cybrid, subgenome, polymerase chain reaction, 95
Mitochondrion, lipoperoxidation, lipoxygenase, microsome, phospholipase, proton gradient, 31
Morphology, somatic hybrid, tomato, genetic stability, individual variation, 225
Mutant, rice, endosperm, protein, lysine, 145

Nitrate reductase, tobacco cell suspensions, cytokinin, light, chloroplast differentiation, poly(A) mRNA, 11
Nitrogen fixation, lupin, *Lupinus angustifolius*, nodulin, root nodule, 5′ upstream region, 155
Nodulin, lupin, *Lupinus angustifolius*, nitrogen fixation, root nodule, 5′ upstream region, 155

P515 electrochromic absorbance change, chlorophyll fluorescence, photophosphorylation, phytotoxin, tentoxin, chloroplast coupling factor, 119
Paspalum notatum, apomixis, embryogenic callus, suspension culture, plant regeneration, 73
Pennisetum glaucum, tissue culture, somaclonal variation, agronomic traits, 53
Phenotypic variation, poplar, tissue culture, putative albino, calli-clones, chromosome number, growth related protein, 89
Phospholipase, lipoperoxidation, lipoxygenase, microsome, mitochondrion, proton gradient, 31
Photophosphorylation, chlorophyll fluorescence, P515 electrochromic absorbance change, phytotoxin, tentoxin, chloroplast coupling factor, 119
Phytotoxin, chlorophyll fluorescence, P515 electrochromic absorbance change, photophosphorylation, tentoxin, chloroplast coupling factor, 119
Placental pollination, *Lilium longiflorum*, pollen tube growth, micropyle, cut-style pollination, grafted style, 105
Plant breeding, *Triticum aestivum*, environmental factors, plant growth regulators, response functions, 195
Plant growth regulators, *Triticum aestivum*, environmental factors, plant breeding, response functions, 195
Plant regeneration, *Paspalum notatum*, apomixis, embryogenic callus, suspension culture, 73
Plant regeneration, *Rosa rugosa* Thunb., somatic embryogenesis, sugars, galactose, sorbitol, 187
Plant regeneration, *Zea mays* L., protoplasts, DNA-mediated transformation, methotrexate, dihydrofolate reductase, 41
Plant regeneration, barley, *Hordeum vulgare*, somatic embryogenesis, micro-explants, 211
Plant regeneration, protocorm-like bodies, tissue culture, long-term cultures, 63
Pollen tube growth, *Lilium longiflorum*, placental pollination, micropyle, cut-style pollination, grafted style, 105
Pollen, cyclohexylamine, exine, 4-*O*-methylmorpholine *N*-oxide, protoplasts, spores, 219
Poly(A) mRNA, tobacco cell suspensions, cytokinin, light, chloroplast differentiation, nitrate reductase, 11
Polymerase chain reaction, *Brassica napus*, cybrid, mitochondria, subgenome, 95
Poplar, tissue culture, putative albino, calli-clones, phenotypic variation, chromosome number, growth related protein, 89
Precarthamin, *Carthamus tinctorius* L., glucose oxidase, flower colour modification, 1
Protein kinase, ferredoxin, ferredoxin:$NADP^+$ oxidoreductase, protein phosphorylation, thylakoid membrane (spinach), 21
Protein phosphorylation, ferredoxin, ferredoxin:$NADP^+$ oxidoreductase, protein kinase, thylakoid membrane (spinach), 21
Protein synthesis, translation system, cell-free extracts, ribosome-inactivating proteins, melonin, *Cucumis melo*, 127
Protein, rice, mutant, endosperm, lysine, 145
Protocol, clonal, cauliflower curd, 175
Protocorm-like bodies, plant regeneration, tissue culture, long-term cultures, 63
Proton gradient, lipoperoxidation, lipoxygenase, microsome, mitochondrion, phospholipase, 31
Protoplasts, *Zea mays* L., DNA-mediated transformation, methotrexate, dihydrofolate reductase, plant regeneration, 41

Protoplasts, cyclohexylamine, exine, 4-*O*-methylmorpholine *N*-oxide, pollen, spores, 219
Prunus spp., adventitious bud regeneration, mature explant, in vitro culture, thidiazuron, silver nitrate, 201
Putative albino, poplar, tissue culture, calli-clones, phenotypic variation, chromosome number, growth related protein, 89

Response functions, *Triticum aestivum*, environmental factors, plant breeding, plant growth regulators, 195
Ribosome-inactivating proteins, translation system, protein synthesis, cell-free extracts, melonin, *Cucumis melo*, 127
Rice, mutant, endosperm, protein, lysine, 145
Rice (*Oryza sativa* L.), seed embryo proteins, subspecies, *indica*, *japonica*, two-dimensional gel electrophoresis, 167
Root nodule, lupin, *Lupinus angustifolius*, nitrogen fixation, nodulin, 5′ upstream region, 155
Rosa rugosa Thunb., somatic embryogenesis, plant regeneration, sugars, galactose, sorbitol, 187

Second messenger, calcium movements, inositol trisphosphate, vacuole, tonoplast, 135
Seed embryo proteins, rice (*Oryza sativa* L.), subspecies, *indica*, *japonica*, two-dimensional gel electrophoresis, 167
Silver nitrate, *Prunus* spp., adventitious bud regeneration, mature explant, in vitro culture, thidiazuron, 201
Somaclonal variation, *Pennisetum glaucum*, tissue culture, agronomic traits, 53
Somatic embryogenesis, *Rosa rugosa* Thunb., plant regeneration, sugars, galactose, sorbitol, 187
Somatic embryogenesis, barley, *Hordeum vulgare*, plant regeneration, micro-explants, 211
Somatic hybrid, tomato, genetic stability, morphology, individual variation, 225
Sorbitol, *Rosa rugosa* Thunb., somatic embryogenesis, plant regeneration, sugars, galactose, 187
Spores, cyclohexylamine, exine, 4-*O*-methylmorpholine *N*-oxide, protoplasts, pollen, 219
Subgenome, *Brassica napus*, cybrid, mitochondria, polymerase chain reaction, 95
Subspecies, rice (*Oryza sativa* L.), seed embryo proteins, *indica*, *japonica*, two-dimensional gel electrophoresis, 167
Sugars, *Rosa rugosa* Thunb., somatic embryogenesis, plant regeneration, galactose, sorbitol, 187
Suspension culture, *Paspalum notatum*, apomixis, embryogenic callus, plant regeneration, 73

Tentoxin, chlorophyll fluorescence, P515 electrochromic absorbance change, photophosphorylation, phytotoxin, chloroplast coupling factor, 119
Thidiazuron, *Prunus* spp., adventitious bud regeneration, mature explant, in vitro culture, silver nitrate, 201
Thylakoid membrane (spinach), ferredoxin, ferredoxin: $NADP^+$ oxidoreductase, protein kinase, protein phosphorylation, 21
Tissue culture, *Pennisetum glaucum*, somaclonal variation, agronomic traits, 53
Tissue culture, cell membrane stability, groundnut, water stress, 179
Tissue culture, poplar, putative albino, calli-clones, phenotypic variation, chromosome number, growth related protein, 89
Tissue culture, protocorm-like bodies, plant regeneration, long-term cultures, 63
Tobacco cell suspensions, cytokinin, light, chloroplast differentiation, nitrate reductase, poly(A) mRNA, 11
Tomato, somatic hybrid, genetic stability, morphology, individual variation, 225
Tonoplast, calcium movements, inositol trisphosphate, vacuole, second messenger, 135
Translation system, protein synthesis, cell-free extracts, ribosome-inactivating proteins, melonin, *Cucumis melo*, 127
Triticum aestivum L., anther culture, haploid suspension, fertile dihaploid plant, 81
Triticum aestivum, environmental factors, plant breeding, plant growth regulators, response functions, 195
Two-dimensional gel electrophoresis, rice (*Oryza sativa* L.), seed embryo proteins, subspecies, *indica*, *japonica*, 167

5′ Upstream region, lupin, *Lupinus angustifolius*, nitrogen fixation, nodulin, root nodule, 155

Vacuole, calcium movements, inositol trisphosphate, tonoplast, second messenger, 135

Water stress, cell membrane stability, groundnut, tissue culture, 179

Zea mays L., protoplasts, DNA-mediated transformation, methotrexate, dihydrofolate reductase, plant regeneration, 41

Plant Science, 90 (1993) 237
Elsevier Scientific Publishers Ireland Ltd.

Author Index

Volume 90 (1993)

Ábrahám, M. 41
Adachi, T. 73
Akashi, R. 73
Arias, F.J. 127

Babczinsky, J. 211
Ball, S.T. 195
Barnabás, B. 81
Bottka, S. 41
Braidot, E. 31

Canut, H. 135
Carrasco, A. 135

Dosba, F. 201
Dudits, D. 41
Duke, S.O. 119

Escalettes, V. 201
Everard, J.D. 219

Farnden, K.J.F. 155
Fehér, A. 41
Ferreras, J.M. 127
Franceschi, V.R. 219

Girbes, T. 127
Goh, C.-J. 63
Golds, T.J. 211
Golovkin, M.V. 41
Grant, M.R. 155

Hall, R.B. 89
Harinarayana, G. 53
Hashimoto, A. 73
He, G.Y. 81
Hodges, M. 21

Iglesias, R. 127
Imamizo, H. 187
Imamura, J. 95

Janson, J. 105

Konzak, C.F. 195
Koop, H.-U. 211
Korbuly, E. 81
Kumar, A. 175
Kumar, J. 175
Kumar, P.P. 63
Kumar, V.A. 175
Kunitake, H. 187

Leydecker, M.-T. 11
Loewus, F.A. 219

Macrì, F. 31
Miginiac-Maslow, M. 21
Mii, M. 187
Monma, S. 225
Moon, H.K. 89
Mórocz, S. 41
Moureaux, T. 11
Muñoz, R. 127

Nagarathna, K.C. 53
Nathan, M.J. 63

Petrussa, E. 31

Ramesh, K. 179
Ranjeva, R. 135
Reynolds, P.H.S. 155
Rice, S.J. 155
Rojo, M.A. 127
Rossignol, M. 135

Saito, K. 1
Sakai, T. 95
Sakata, Y. 225
Saruyama, H. 167
Schaeffer, G.W. 145
Sharpe, F.T. 145
Shetty, H.S. 53
Shetty, S.A. 53
Shinbashi, N. 167
Son, S.H. 89
Stafford, H.A. 117
Suty, L. 11

Tarlyn, N.M. 219
Teyssendier de la Serve, B. 11

Venkateswarlu, B. 179
Vianello, A. 31

Zhou, H 195